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Mr. Lanning - Cross

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1 (The following was heard in open court at
2 10:24 a.m.)

3 THE COURT: Good morning, everyone.

4 ALL: Good morning, Your Honor.

5 THE COURT: Please be seated. Getting in
6 this morning was a little bit of a chore, but I'm
7 pleased that you all made it safe and sounds. It's
8 better to be late than to take any chances. So
9 although we're beginning a little late, we'll
10 continue with the cross, Mr. Goettle.

11 (Pause in proceedings.)

12 THE COURT: We're continuing with the
13 cross-examination of Mark Lanning.

14 MR. GOETTLE: Thank you, Your Honor.

15 CROSS-EXAMINATION

16 BY MR. GOETTLE:

17 Q Good morning, Mr. Lanning.

18 A Good morning.

19 Q Were you like me and halfway hoping for a snow
20 day today?

21 A No.

22 Q No?

23 A I look forward to these experiences.

24 Q That makes one of us. Mr. Lanning, just so we
25 can kind of reinvigorate the brains. Where we

Mr. Lanning - Cross

4

1 were -- I think where we left off yesterday is we
2 were talking about your third -- your third holistic
3 characterization -- characteristic regarding -- in
4 determining whether a network element is a core
5 network element of a cellular network, okay?

6 A Okay.

7 Q And just so the record is clear, do you agree
8 with me that when we -- when we get past this one
9 they're going to go -- they're going to go a lot
10 faster?

11 A I have no idea.

12 Q You don't know. Okay. Well --

13 A You're asking the questions.

14 Q That's true. That's true. How would you know?
15 Okay. So Sprint documents -- let's look at some of
16 the Sprint documentation that you showed the jury
17 yesterday.

18 (Pause in proceedings.)

19 Q So this was one of -- one of -- this is your
20 slide from yesterday. Do you recall that? It's hard
21 to see on the ELMO, but it's slide 52. Do you rec --

22 A Yes.

23 Q Okay. This was one of the Sprint documents you
24 looked at?

25 A Yes.

Mr. Lanning - Cross

5

1 Q What was this document describing?

2 A As the title says, it's describing the "Next
3 Generation Messaging and Imaging Design" It's a
4 design document.

5 Q It's -- that's the title of the document, but
6 what was it talking about?

7 (Pause in proceedings.)

8 Q Would it help you to see the figure that -- I'm
9 happy to put the figure up.

10 THE COURT: Which slide again?

11 MR. GOETTLE: The cover page, Your Honor,
12 that we're on right now is slide 52.

13 THE COURT: I have it.

14 THE WITNESS: I believe I discussed this
15 document multiple times, one time for the SMS and one
16 time for the MMSC. And what this document is
17 describing is the migration of the MMSC from the
18 Picture Mail application into the internal Sprint
19 network.

20 BY MR. GOETTLE:

21 Q Okay, thank you.

22 THE COURT: Let the record reflect that the
23 examination relates to DX-13, which is slide 52 in
24 the Lanning slide deck.

25 BY MR. GOETTLE:

Mr. Lanning - Cross

6

1 Q Okay. So now I've put up slide 53, which also
2 relates to DX-13. Do you see that we're on slide 53
3 now, sir?

4 A Yes.

5 Q Okay. And you put this diagram up -- or you
6 showed this diagram to the -- to the jury yesterday
7 as well, correct?

8 A Yes.

9 Q Okay. So I want to make sure -- and I believe
10 this was one of the areas of focus. I've just zoomed
11 in on the box that says "Sprint In Network," right?
12 That was one of your areas of focus yesterday when
13 you were explaining this document to the jury?

14 A Yes.

15 Q Okay. And when this says "Sprint In Network"
16 what do -- what network are we talking about there?
17 Is it the core network? Are those core network
18 elements and that's the core network? Is it the
19 cellular network? Is that Sprint's wireless network?
20 What is it?

21 (Pause in proceedings.)

22 A What this slide is showing is it's a comparison
23 between off network, meaning outside of Sprint's
24 cellular network on the left, as you can see on the
25 box that you're not showing on the screen.

Mr. Lanning - Cross

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1 Q Let me show that.

2 A It's the box on the left. So the comparison is
3 the hosted off network, meaning the Picture Mail
4 implementation, meaning the Sprint in network,
5 components that are in network that are in
6 relationship to messaging. So this would be the
7 components that are inside the core network that have
8 to deal with messaging.

9 Q Okay. So what's inside the box is what's a part
10 of Sprint's core network?

11 A Not all of Sprint's core network, as I clarified.
12 And that's looking at the diagram. This document is
13 for messaging. It has a focus on messaging. So the
14 box is providing a contrast between which network
15 elements are off network, off the Sprint network, and
16 which ones are in the network.

17 Q Okay. So just to make sure that's clear, the
18 box -- what's shown in the box are core network
19 elements, but they're not all of Sprint's core
20 network elements?

21 A Yes.

22 Q Okay. So I'm going to write on here "all," and
23 I'm going to put in quotes, "core network elements."
24 And I put that in quotes because that's the claim --
25 that's the claim language, right?

Mr. Lanning - Cross

8

1 A Again --

2 Q Excuse me, that's the Court's construction?

3 A Again, I think that saying "all" is misleading.

4 It is in relationship to the messaging because --

5 Q Well --

6 A And I'm being careful here --

7 Q -- you're right.

8 A -- because there are other core network elements
9 that are outside that box that aren't specific to the
10 document or the subject matter of the document.

11 Q Fair characterization. So I wrote "all in the
12 box are core network elements." Everything in that
13 box is a core network element. There could be
14 others.

15 THE COURT: You're writing something on the
16 ELMO.

17 MR. GOETTLE: I am.

18 THE COURT: We're not getting it.

19 MR. GOETTLE: You're -- oh, I'm -- my
20 apologies, Your Honor.

21 THE COURT: Well, now we are.

22 MR. GOETTLE: In fact, while we're kind of
23 stalled, I'm going to write on here that this is
24 Plaintiff's Drawing -- I think we're up to Number 4.

25 BY MR. GOETTLE:

Mr. Lanning - Cross

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1 Q So I'll repeat the question. Sorry? I'll repeat
2 the question. All of the elements in -- shown in
3 that box are core network elements of Sprint's
4 cellular network, and Sprint has other core network
5 elements that are not shown in that box?

6 A And as I look at it, I would agree with that
7 statement. I need to correct my statement because
8 there are some boxes that I haven't even analyzed in
9 this box like one -- that are not relevant to the
10 case and Dr. Akl didn't identify one way or the
11 other. For instance, I see in the top, right of this
12 box that's colored in pink or red, "Business Tools."
13 I have no idea what "Business Tools" mean. And so
14 there's elements that may or may not be part of
15 Sprint's core network as far as the Court has
16 defined, but, as Sprint has clearly said, those are
17 in network in contrast to the Picture Mail
18 functionality that is off network.

19 Q So suffice to say that you don't know -- when
20 Sprint writes "In Network" you don't know one way or
21 the other whether Sprint means in Sprint's -- in
22 Sprint's core network --

23 A That's not --

24 Q -- because some of these elem -- oh, I'm sorry.

25 A I don't believe that's an accurate

Mr. Lanning - Cross

10

1 characterization. That's not what I said.

2 Q Okay.

3 A I'm saying that they may be, but they're not part
4 of the Court's construction. So, for instance, the
5 Court for the cellular network and the different core
6 network elements that say "may be part of the core
7 network," "business tools" is not listed as part of
8 the "core network" definitions, "PSA" is not listed
9 as the core -- as one of the possible core network
10 elements. Those have not been evaluated, but from
11 this document, Sprint considers those to be inside
12 their core network. So this is a Sprint
13 documentation -- a Sprint document. Sprint engineers
14 are saying what's in their network, what's outside
15 their network. And so this is the definition of
16 what's there.

17 Q So -- well, you went to the Court's claim
18 construction.

19 MR. GOETTLE: Can -- Mr. Dyer, can you put
20 up the Court's claim construction, the one that the
21 jury has in their binder?

22 (Pause in proceedings.)

23 MR. GOETTLE: And can you blow up "cellular
24 network?"

25 (Pause in proceedings.)

Mr. Lanning - Cross

11

1 BY MR. GOETTLE:

2 Q Just so the record is clear again, when the Court
3 writes that a core network element "may be a
4 messaging server," the Court is not saying one way or
5 the other whether a messaging server is a core
6 network element, correct?

7 A It says it may be or that means it may not be as
8 well.

9 Q Okay. And you do agree also, sir, that when it
10 says, "The core network elements, which may include,"
11 the things listed, that also means that there might
12 be other things that are core network elements that
13 are not listed there, correct?

14 A There may be, but as my point that I'm making is,
15 I don't see the words "business tools," I don't see
16 "PSA," I don't see "OMG," I don't see "SO." And I
17 didn't evaluate those because Dr. Akl didn't claim
18 one way or another. Now, it was Dr. Akl's burden to
19 show infringement, to identify any of the relevant
20 network elements or the core network elements. Those
21 weren't identified. So I'm saying those just weren't
22 part of my analysis. But it clearly -- those boxes
23 are clearly defined as being inside the Sprint
24 network.

25 So we're talking about -- I guess what I'm

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1 trying to explain is we're talking about two very
2 different things here. We're talking about a sprint
3 document that was written totally independent of the
4 patent and the Court's construction before the
5 lawsuit, or independent of the lawsuit I think is
6 safe to say. So you have Sprint engineers defining
7 what components are in the network, which components
8 are off the network, and they weren't looking at this
9 list. And when Dr. Akl did his evaluations he did
10 not include any of those nodes or those network
11 elements, so I didn't include those in my analysis
12 either. So I simply don't know whether those would
13 be considered a core network element as per the
14 Court's construction.

15 Q So it could be that business tools, whatever that
16 is, they could be core network elements under your
17 seven characteristic holistic analysis?

18 A They may have been if I would have considered
19 those or if Dr. Akl would have identified those.
20 Then we would have done more research and I'd have a
21 better answer or more specific answer for you.

22 Q Well, you keep coming back to Dr. Akl, but Dr.
23 Akl doesn't agree, right, with your seven
24 characteristic holistic analysis in the first place,
25 and he doesn't agree to -- that it's proper to just

Mr. Lanning - Cross

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1 rely on documents without really understanding what
2 the documents mean, correct?

3 A I don't recall Dr. Akl -- I think now you're
4 characterizing Dr. Akl's testimony, but, as I stated,
5 Dr. Akl was responsible for providing his
6 infringement analysis and what core networks were
7 involved and which were the infringing elements.
8 These elements weren't identified. And so it wasn't
9 up to me to go and identify all of the other network
10 elements that weren't even relevant to this case.

11 MR. GOETTLE: Okay. Can we go back to
12 the -- thanks.

13 BY MR. GOETTLE:

14 Q Okay. Suffice to say then that you don't know if
15 all of the elements in this box are core network
16 elements under the Court's construction?

17 A I don't know because I haven't analyzed them, so
18 my -- the most accurate answer I can give you is
19 boxes likes "Business Tools," I don't know what's in
20 that box called "Business Tools." I haven't
21 provided -- or performed a detailed analysis, so I
22 don't know one way or another whether "business
23 tools" is part of the Court's construction for "core
24 network elements."

25 (Pause in proceedings.)

Mr. Lanning - Cross

14

1 Q I just circled "Business Tools." What about --
2 what about "Anti-spam?" Is that a core network
3 element of Sprint's -- is that an element that
4 qual -- that is a core network element under the
5 Court's construction?

6 A I would give you the same answer. Again, that
7 was not applicable for my analysis. Again, what I
8 highlighted are the nodes that are applicable, which
9 are the two SMSCs and the message LDAP database.

10 Q Okay. Thank you. How about MTA? Core network
11 element under the Court's construction?

12 A Again, same answer, I didn't perform analysis on
13 the MTA box.

14 Q "Tap Terminals?"

15 A Sorry, I'm trying to -- oh, I didn't perform
16 analysis on that box either.

17 Q "PPG?"

18 A There were some gateways that were analyzed. I
19 believe the PPG was considered a core network
20 element.

21 Q What do you mean "was considered?" I'm asking if
22 you opine that under your holistic analysis, you
23 determined that the PPG was a core network element
24 under the Court's construction.

25 A I should have been clearer. I was trying to

Mr. Lanning - Cross

15

1 recall Dr. Akl's report about what he said about
2 specific gateways. I don't recall the specifics. I
3 know that I did not include in the analysis for PPG,
4 again, for the same reason that Dr. Akl did not
5 accuse that as one of -- being one of the infringing
6 core network elements.

7 Q How about "SO Server?"

8 A That would be the same answer.

9 Q Okay. "OMG?"

10 (Pause in proceedings.)

11 A That would be the same answer as well.

12 Q Okay. I think that says "PSA."

13 A Same answer as well.

14 Q "Mediation Servers?"

15 (Pause in proceedings.)

16 A Same answer.

17 Q Thank you. And now I'm going to -- I'm going to
18 go outside of the box, okay?

19 A Okay.

20 Q Same figure, look down here. How about is the
21 voicemail platform a core network element of Sprint's
22 cellular network?

23 (Pause in proceedings.)

24 A And are you referring to the -- I'm making
25 sure --

Mr. Lanning - Cross

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1 Q Right where I'm pointing, sir, which is right
2 above "deployment logical" in the wording of the
3 document.

4 (Pause in proceedings.)

5 A I don't recall whether this means the replacement
6 voicemail platform without looking through my report
7 and a lot of research. I just don't recall whether
8 this is referring to the voicemail platform that's
9 the Picture Mail or really the replacement MMMC that
10 Sprint was using to replace the Picture Mail off
11 network solution.

12 Q Sir, this is -- this is -- just to be -- just to
13 make sure that we're on the same page, this is
14 talking about voicemail --

15 A Oh.

16 Q -- not -- sorry, that says -- I know it's hard to
17 tell, but that says "voicemail platform."

18 A Sorry. Thank you.

19 Q No problem.

20 A If I'm taking time it's because I'm trying to
21 read this slide, the quality of the slide -- I was
22 trying to --

23 Q Well, this is important, so please do take your
24 time.

25 A Yes. So --

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1 (Pause in proceedings.)

2 A Yes, I believe the voicemail platform or the
3 voice messaging system would have been part of the
4 Sprint's core network.

5 Q So I would be -- it would be fair for me to label
6 that "core network element?"

7 A Yes, it's not one of the ones that was analyzed
8 for infringement, but I believe that would be a core
9 network element.

10 Q And it's not shown in the box that we were
11 looking at before that says "Sprint In Network?"

12 A That's correct, because, as I explained earlier,
13 the box is in relationship to messaging, and the
14 voicemail platform would not be in relationship to
15 messaging. Again, this document's focus is in regard
16 to the messaging components.

17 Q How about the MSC? Is that a core network
18 element of Sprint's cellular network?

19 A Yes.

20 Q Actually, going back to your last answer, your
21 testimony is that even though you don't know what
22 these boxes are doing, everything in this box that
23 says "Sprint In Network" is related to messaging?

24 A That's my understanding for the focus of the
25 document. As the document we covered, the title of

Mr. Lanning - Cross

18

1 the document is "Next Generation Messaging and
2 Imaging." So it may be associated with messaging or
3 imaging, but that's the focus of the document.
4 That's what the engineers were writing. That's where
5 the focal points were. And they didn't include every
6 part of the network. They were focusing on the
7 messaging parts, messaging and imaging.

8 Q The document is about messaging and imaging, and
9 your testimony is that even though you don't know
10 what a lot of these boxes inside "Sprint In Network,"
11 you don't know what they do, but you know that
12 they're related to messaging?

13 A That's my understanding of the document. Again,
14 we didn't analyze -- when I say "we," Dr. Akl and I
15 didn't analyze every node and every element in the
16 Sprint network. There were ones that were applicable
17 to our analysis.

18 Q Okay. I've just put up on the ELMO the wolf
19 vision. It's actually -- it looks like it says "wolf
20 vision." Slide 55 from your presentation. Do you
21 recognize that?

22 A Yes.

23 Q And is this showing a diagram from DX-209 at page
24 58?

25 A Yes.

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19

1 Q Okay. And yesterday, we talked a little bit
2 about the fact witness testimony that we heard two
3 days ago, and I believe that you've testified that
4 you wouldn't just take the notion that these
5 witnesses used the term "core network" and then link
6 that up to "core network elements" in the claim
7 construction? Did I get that right?

8 A Yes, it -- the terminology used in Sprint's
9 documents by Sprint's employees doesn't -- it may,
10 but it doesn't necessarily match up with the Court's
11 construction because they're two independent
12 documents done at a different time. The Sprint
13 employees were doing their design work and defining
14 what they meant as "core," which may be the same or
15 different than the Court's construction.

16 Q Which means you shouldn't really -- it shouldn't
17 play into your analysis at all because you don't know
18 how they meant it?

19 A I wouldn't agree with that. It definitely played
20 into my analysis, but I had to perform an analysis to
21 see if the elements that they were identifying were
22 part of the Court's construction, or, as I showed by
23 this slide, part of the standard. If you recall, I
24 took each one of the boxes along the top and mapped
25 those to the ANSI standard.

Mr. Lanning - Cross

20

1 Q Okay. And you were here for Mr. Hoelzle's
2 testimony, correct?

3 A That's not correct.

4 Q You missed it?

5 A That's right.

6 Q It was fun too. I'm being -- I'm just kidding,
7 of course. Okay. So do you agree -- do you agree
8 with Mr. Hoelzle that what makes a network element a
9 part of Sprint's core network is whether the element
10 is used in offering one of Sprint's three services,
11 namely voice, messaging, or data? It's a long
12 question. I'm happy to repeat it.

13 A And that -- and that's fine. I was just
14 processing that. And, again, from Mr. Hoelzle's
15 point of view, that's what a Sprint employee -- or an
16 engineer would define, which I would agree with from
17 a Sprint engineering point of view. That's not what
18 the Court has given us as a construction, but working
19 with engineers, I would think that's a reasonable
20 definition.

21 Q Well, the question isn't whether it's a
22 reasonable definition, right, sir? The question is
23 whether -- the question is whether under the Court's
24 construction of "core network element," is what Mr.
25 Hoelzle is saying correct?

Mr. Lanning - Cross

21

1 A That's a different question. You asked me -- you
2 told me what his definition was and I --

3 Q Okay.

4 A -- was answering your question --

5 Q Fair enough.

6 A -- about his definition.

7 Q You're right.

8 A You jumped a whole leap on me here.

9 Q Okay. Well, then let me -- you're right. Let me
10 rephrase the question. Do you agree that whether an
11 element qualifies -- excuse me, you don't like the
12 word "qualifies" -- whether an element is a core
13 network element under the Court's construction, you
14 look at whether it is used in offering one of three
15 Sprint services, namely voice, messaging, or data?

16 A Again, that's Mr. Hoelzle's definition of what
17 Sprint defines as a core network. I took the Sprint
18 documentation, see what the Sprint documentation
19 says, what the engineers are saying and describing
20 independent of this trial and this litigation, and
21 then I, with my understanding, apply of whether that
22 meets the requirements for the Court's construction.
23 I just can't take these directly from a Sprint
24 document and say they automatically meet the Court's
25 construction, is the point that I'm making, without

Mr. Lanning - Cross

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1 performing some analysis to qualify them.

2 Q So can you answer my question yes or no? And
3 I'll repeat it if you would like.

4 A If you repeat it --

5 Q Okay.

6 A -- I'll try.

7 Q Do you agree that to determine whether an element
8 is a core network element under the Court's
9 construction, that you look at whether that element
10 is used in offering one of three Sprint services,
11 namely voice, messaging, or data?

12 A Well, I can't answer that question yes or no
13 because in order to understand whether it's a core
14 network elements, the first thing I have to do is
15 look at the Courts construction. And so for the
16 Court's construction, it excludes outside the core
17 network. The first two things that it includes are
18 wireless terminal and the bay station system. So
19 those two are not core elements because those are the
20 first parts of the Court's construction for the
21 "cellular network."

22 Now, if a Sprint person said in their
23 documentation that a wireless terminal or a bay
24 station was part of the core network, that's what
25 they believe because that's part of offering those

Mr. Lanning - Cross

23

1 services, but that would not be part of Sprint's core
2 network as far as the Court's construction is. So I
3 would need to apply that. So the answer to your
4 question is it depends. I would need to look at each
5 of the network elements that Sprint feels is
6 necessary to provide one of the services to see where
7 they would fit in the Court's construction.

8 Q So you would need to do more investigation and
9 would not just accept the statement that I made as
10 correct?

11 A Well, that's correct. I -- and maybe I'm not
12 being clear, but in my mind, if you look at voice,
13 you look at data, and you look at messaging, there's
14 one common component to all those -- or two common
15 components. One is the cell phone, or the wireless
16 terminal. The next element is the bay station
17 system, the tower and the bay station controller. So
18 if Sprint called those core because they were
19 required, I would need to back off of that and say I
20 understand they're required to provide those
21 services, but when I look at the Court's
22 construction, those are not core network elements.
23 They're part of the cellular network, but not part of
24 the core network elements.

25 Q Are you done your answer, sir?

Mr. Lanning - Cross

24

1 A Yes.

2 Q Okay. Okay, let's go on to your fourth holistic
3 characteristics called "Protocols and Interfaces,"
4 okay?

5 A Okay.

6 Q Is it fair to say that for the accused -- the
7 messaging servers that are accused in this case or
8 involved in the infringement allegations in this
9 case, those messaging servers, when you think about
10 those messaging servers protocols and interfaces
11 didn't cut one way or the other?

12 A I can break the answer -- my answer up in two
13 parts. For the short message service centers, the
14 interfaces and protocols have been consistent
15 throughout their history because Sprint has always
16 included the short message service centers internal
17 to their network, and the protocols and interfaces
18 are the same because they're inside the network, or
19 internal to Sprint's cellular network. However, when
20 I look at MMSCs I have to look at interfaces and
21 protocols. If I -- if you remember, when I was
22 discussing the Picture Mail MMSC that was external to
23 Sprint's network it had some special protocols and
24 interfaces that did catch my eye that were important,
25 specifically, the VPN, virtual private network,

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25

1 functionality that was needed for security because
2 there was a possibility of hacking into the internet
3 connections because that system was external to
4 Sprint's network. So for MMSCs, the interfaces and
5 connections were important for me to understand.

6 Q Okay. So if I understood that answer, for SMS,
7 protocols and interfaces didn't cut one way or the
8 other in your analysis?

9 A I wouldn't say that. I said they're in all the
10 same internal interfaces, so they all -- I think I
11 even used the words in my deposition that they
12 "scream" the word "internal" to me because they were
13 types of protocols and interfaces that are only used
14 internal to Sprint's network.

15 (Pause in proceedings.)

16 Q Okay. I'm going to put up -- this is slide 32
17 from your presentation. Do you recognize that, sir?

18 A Yes.

19 Q Okay. What we're looking at is figure two of
20 DX-3, okay?

21 A Yes.

22 Q Okay. And you referred to your testimony at your
23 deposition about it's scream -- when an element is
24 using SS7 it screams internal? Is that what you were
25 talking about earlier?

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1 A If it uses SS7 without the VPN capability.

2 Q Okay. And we -- I think we established already
3 that this PSTN is not part of the cellular network,
4 correct?

5 A That's correct. The N in the acronym is --
6 that's a separate network. That's the PSTN, or the
7 landline network. "Public switch telephone network"
8 is what the acronym stands for.

9 Q Okay. And the PSTN can communicate with the MSC
10 using SS7, correct?

11 A You can use multiple protocols, but I would agree
12 that that's one of the protocols used.

13 Q Okay. And just to be clear, that would mean that
14 this element that's a core network element, the
15 mobile switching center, is communicating with an
16 element outside of the cellular network using SS7?

17 A That's correct. But -- again, for clarification,
18 but not using VPN. So it is not -- it is a separate
19 internal-type protocol. And when I say "internal" I
20 mean specific to networks, that it's not publicly
21 available or publicly accessible by the public.
22 These are connections and networks that are closed
23 networks from the public.

24 Q Okay. That's just -- I want to make sure the
25 record is clear. It is common for elements on the

Mr. Lanning - Cross

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1 PSTN to communicate with one another using SS7,
2 correct?

3 A Yes, in a closed SS7 network. Specifically,
4 there would be a direct SS7 communications link in
5 the closed network.

6 Q I just wrote on this -- and I'm going to mark
7 this as Plaintiff's Drawing 5. And I took some
8 banter from the back to mean I may have skipped
9 Plaintiff's Drawing 3, so just so the record is
10 clear, there may be no Plaintiff's Drawing Number 3
11 in the record. This is Plaintiff's Drawing 5. And
12 so I just wrote "SS7" coming off of the PSTN and --

13 A Well, that would be the wrong place.

14 Q Oh. Where --

15 A You would want to put it at the circle where it
16 says "A1."

17 Q "A1." Okay. So the -- but elements -- is this
18 PSTN signifying the wired phone network?

19 A Yes, it's signifying a lot with that small box.
20 There's hundreds of telephone switches, millions of
21 lines, a lot of millions of -- tens of millions of
22 phones. So that box has a lot of information in it,
23 and that's why I'm being careful where you write your
24 acronym.

25 Q Well, don't those boxes that you just referred

Mr. Lanning - Cross

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1 to, don't some of those boxes use SS7 to communicate
2 with one another?

3 A Yes, they do.

4 Q Okay. So that's why I put the SS7 coming off
5 where it's coming off. That's accurate, right?

6 A No, not for me. It might be for you, but --

7 Q No?

8 A -- for an engineer and for me looking at that
9 logical box, I don't accept that. If you want to put
10 it on the interface between the MSC and PSTN, I would
11 accept that.

12 Q Here? SS7?

13 A Yes.

14 Q So elements inside a core network of a cellular
15 network can communicate with one another using SS7,
16 right?

17 A Yes.

18 Q Okay. And that, to you, is a signal that they're
19 internal, right?

20 A That it's an internal, or closed, network.

21 Q Okay. And elements that are internal to the core
22 network of a cellular network can also communicate to
23 elements outside the network using the very same
24 protocol, SS7?

25 A Using the same protocol, but using the same

Mr. Lanning - Cross

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1 requirements of a closed network that the public
2 doesn't have access to that interface that's A1, that
3 it's a dedicated interface between the
4 functionalities.

5 Q Okay. Next, let's talk about -- we're going to
6 do four and -- if it's okay with you, we'll do 5 and
7 6 together when I'm -- I'm pointing to Plaintiff's
8 Drawing Number 2, which has your holistic
9 characteristics, and Number 5 is who operates the
10 element, and Number 6 is who owns the element,
11 correct?

12 A Yes.

13 Q Okay. And I'm going to put those together, and
14 if it doesn't work, then we'll pull them apart again,
15 okay?

16 A Okay.

17 Q We'll give it a try.

18 A Again, you're asking the questions.

19 Q Yes, I am.

20 A I'm just trying to answer.

21 Q Okay. So the idea here -- correct me if I'm
22 wrong, sir, but the idea here is, in your view, to
23 determine whether -- as a matter of technology, to
24 determine whether an element is a core network
25 element of a cellular network, you look at who

Mr. Lanning - Cross

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1 operates it, right?

2 A That was one of my considerations.

3 Q And the idea is if it's the network operator
4 that's operating it, that's an indication that the
5 element is a core network element?

6 A That's one of the indications, yes. And I should
7 clarify when I get to ownership, there's been many
8 times that for equipment that we use in the network,
9 that I've used in networks I've designed, is we --
10 most of us know there's a decision. Do you buy it,
11 do you purchase, or do you lease it? So the
12 ownership might not necessarily be owned -- the
13 equipment -- the ownership of the equipment may not
14 be the operator like Sprint, but it's in their
15 network and they're operating it. And so you have to
16 look at both of these considerations.

17 Q Okay. But the patent says the exact opposite,
18 right? The patent says that the operator can both
19 own and operate the messaging server and it would
20 still be external to the cellular network?

21 A I don't know how you say that's opposite of what
22 I said.

23 Q Oh.

24 A To me, I have options as a cellular network
25 operator that I can either purchase equipment or I

Mr. Lanning - Cross

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1 can lease equipment. So while I might not own the
2 equipment that's in my cellular network, I perform
3 the daily, as I refer to, care and feeding for the
4 equipment, or the operation. So, therefore, I look
5 at that and am not bias too much whether the
6 equipment is either leased or purchased.

7 MR. GOETTLE: Mr. Dyer, can you put up
8 PX-2, column seven?

9 (Pause in proceedings.)

10 MR. GOETTLE: And can you blow up the -- at
11 lines four to the end of the paragraph? Oh, you're
12 on the -- I think you might be on the re-examination
13 certificate. If you go back, there's a --
14 confusingly, there's another column seven. It's
15 PX -- it's page ten, sorry.

16 (Pause in proceedings.)

17 BY MR. GOETTLE:

18 Q Okay. Do you need a -- do you need a --

19 A I can read it.

20 Q Okay.

21 A If not, just point me to where --

22 Q So there's a sentence at line four that starts,
23 "Preferably..." Do you see that?

24 A Yes.

25 Q Okay. It reads, "Preferably" -- well, let me set

Mr. Lanning - Cross

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1 this back up again. So we're talking about if a
2 cellular network operator owns or operates the
3 network element, then, to you, that would be an
4 indication that it is a core network element internal
5 to the cellular network, correct?

6 A That would be one of the indications, yes.

7 Q Okay. And so the patent says at col -- at line
8 four on column seven, "Preferably, the MMSC is
9 located outside the GPRS cellular network in the IP
10 network (intranet network) of the operator that also
11 manages said default GGSN." Do you see that?

12 A Yes.

13 Q Okay. And so what that means is the operator can
14 have the messaging server inside its cellular network
15 or outside its cellular network?

16 A Let's be specific with that sentence because
17 there are some acronyms in there that might not mean
18 something to the jury, or anything. If you read,
19 "Preferably, the MMSC," now, that's the multi-media
20 message center, "is located outside the GPRS cellular
21 network..." I don't -- I haven't discussed what GPRS
22 is, but that is part of the European family that is a
23 GSM network that has packet data. It is -- the
24 acronym stands for GSM packet radio system. So what
25 this is saying, specifically, is that the MMSC, the

Mr. Lanning - Cross

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1 multi-media message center, can be located outside a
2 GSM cellular network in an IP network of the operator
3 that also manages said default GGSN. Now, what's
4 GGSN? That's another acronym in the GSN network.
5 And so this sentence is specifically stating where an
6 MMMC could be in a G -- in relationship to a GSM
7 network.

8 Q Okay. So back to my question, what's that saying
9 is the cellular network operator can place its
10 messaging server either inside its cellular network
11 or outside its cellular network, correct?

12 A Maybe I didn't explain very well. What it's
13 really saying is that an MMMC can be internal to a
14 GSM network or external to a GSM network. Sprint is
15 not a GSM network. It's a CDMA2000 network.

16 Q Okay. But we did talk yesterday and I believe
17 the words -- I can't remember the phrase you used,
18 but we did talk yesterday about the patent covering
19 CDMA2000 networks, as well as GSM, correct?

20 A Okay. Again, you're jumping around. You asked
21 me very specifically what this sentence says. I just
22 interpreted that sentence for the jury.

23 Q Okay. But do you agree that the patent applies
24 equally -- those are your words -- equally to a GSM
25 network as to a CDMA network like Sprint's?

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1 A The patent applies generally, but this sentence
2 isn't a general sentence and this sentence isn't in
3 relationship to a CDMA2000 network. This sentence is
4 very specific to a specific kind of network, and
5 that's the GSM family of protocols that are the
6 European that I explained, and not CDMA2000.

7 Q Sir, you've been an expert witness in patent
8 litigation since 2002?

9 A Yes.

10 Q Okay. So you understand that the requirement for
11 a patent is to lay out a description of an
12 embodiment, one embodiment, of the invention so that
13 a skilled artisan can make and use the invention,
14 correct?

15 A That's correct. We have no argument there.

16 Q Okay.

17 A But you asked me to look at this sentence, and
18 maybe you don't like my translation, but I'm very
19 clearly stating what this sentence says to one of
20 ordinary skill, meaning how an engineer would
21 understand this sentence.

22 Q But you do recognize that the preferred
23 embodiment that's described in this patent, the
24 entirety of it, including what you're looking at on
25 your screen -- the entirety of the preferred

Mr. Lanning - Cross

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1 embodiment is described with respect to a GSM
2 network, correct?

3 A Yes, as I covered, and in figure two, I showed
4 all these same acronyms and explained that was for
5 the European network.

6 Q Okay. But, again, the patent equally applies to
7 a CDMA2000 network?

8 A It says that it equally applies, even though all
9 the examples are for a GSM network, yes.

10 Q Thank you. Okay.

11 (Pause in proceedings.)

12 Q We're up to CFA number 7. So your seventh
13 holistic characteristic is the physical location of
14 the messaging server, correct?

15 A The physical location of the messaging servers,
16 not just what city are they in, but in relationship
17 to other components that Dr. Akl claimed were core
18 network elements.

19 Q So is a more appropriate wording of this
20 "relative physical location?"

21 A I think "physical location" -- "relative physical
22 location" is fine. I looked at both. But then, as I
23 pointed out to the jury as I looked at each location,
24 for instance, it wasn't important to me whether the
25 location was in Reston, Virginia or Lenexa, Kansas.

Mr. Lanning - Cross

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1 It was, I guess I would agree, the relative location
2 of where is the message server in relation to the SPS
3 that Dr. Akl said was a core network element? And I
4 used multiple examples that they were both next to
5 each other.

6 Q So would it be more accurate to insert the word
7 "relative" here, "relative physical location?"

8 A I think that would be fine.

9 Q Okay.

10 A I probably thought of both, but at the -- at the
11 end of my analysis I think the key part, as I just
12 explained, was more the relative locations to other
13 network elements that Dr. Akl claimed were core
14 network elements.

15 Q Okay. So I added in the word "relative" on
16 Plaintiff's Drawing Number 2 in red. Okay. So just
17 so the record is clear, you showed -- this is your
18 demonstrative slide 17 from yesterday, correct?

19 A Yes, based on the results of my analysis.

20 Q Okay. So you did not get this from a Sprint
21 document? This was you -- your graphic?

22 A Yes.

23 Q Okay. And just so that -- so that everybody is
24 clear, when you have this box here, this yellow box
25 that's labeled "core network" are you suggesting that

Mr. Lanning - Cross

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1 all of these elements that you're showing in that
2 yellow box are in the same relative location?

3 A No, I'm saying they're all in the core --
4 Sprint's core network.

5 Q Okay. So the jury shouldn't look at this box as
6 sort of interpreting it as a building, a building
7 housing all of this equipment, right?

8 A And I hope I didn't convey that because I showed
9 multiple slides that show that these buildings were
10 in different cities in different parts of the
11 country.

12 Q Okay. So let's go with the -- let's start with
13 the mobile switching centers. Where are they
14 located?

15 A In the switching centers -- now, we have to be
16 careful because you're asking me -- again, it sounds
17 like a real simple question, but there's many
18 switches in the Sprint network and there's many MSCs
19 that are used for different functions, a gateway MSC
20 versus a serving MSC. So I would need to see the
21 whole physical network diagram. And I -- again, I
22 didn't analyze where every MSC is at. There's -- my
23 guess would be there's tens and probably on the order
24 of 30 to 50, but, again, I'm guessing just based on
25 my experience based on the capacity of the Sprint

Mr. Lanning - Cross

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1 cellular network.

2 Q Well, then maybe I can get at it a different way
3 then. You've heard -- you've heard the term
4 "datacenter" with respect to Sprint's network?

5 A That's one of the terms I've heard, yes.

6 Q And you've heard the term "core site" with
7 respect to Sprint's --

8 A That's another term I've used for a -- or heard
9 for a site, yes.

10 Q And do you agree with me that when the Sprint --
11 when we've heard Sprint witnesses talk about those
12 two things they're the same, they mean the same
13 thing, the same building?

14 A I think that's correct.

15 Q Okay.

16 A I didn't sit there and compare every definition,
17 but from my recollection, I believe that's correct.
18 I would also add another definition that seems to go
19 with those two, and that's "bunkers."

20 Q Is the mobile switching center -- is there any
21 Sprint mobile switching center at a datacenter, at a
22 core site, or at a bunker?

23 (Pause in proceedings.)

24 A For the ones that I analyzed, no, there's not an
25 MSC in those boxes.

Mr. Lanning - Cross

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1 Q So I'm going to -- I'm going to label this
2 Plaintiff's Drawing 6. I think I'm up to --

3 (Pause in proceedings.)

4 Q I put my other one away. I'm going to say 6.

5 THE COURT: On what slide are you writing?

6 MR. GOETTLE: I'm writing on slide 17, Your
7 Honor.

8 THE COURT: Okay.

9 MR. GOETTLE: I'm going to call that
10 Plaintiff's Drawing 6 in the hopes that I had a 5.
11 BY MR. GOETTLE:

12 Q Okay. And so, sir, can -- would it be fair to
13 then -- to write above "mobile switching centers,"
14 "not at datacenter," "not located at datacenter?"

15 A I don't think I would call it "datacenters."

16 Q Okay.

17 A My slides --

18 Q You would rather call it "core sites?"

19 A My slides either refer to them as "core sites" --

20 Q Okay.

21 A -- or "bunkers."

22 Q Okay. I'll do that. "Not at core site or
23 bunker." But you would prefer that I didn't use the
24 term "datacenter?"

25 A I think that would be misleading.

Mr. Lanning - Cross

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1 Q Okay.

2 A "Datacenter" has -- Sprint also has datacenters
3 that are not core sites and bunkers, so I just want
4 to try to be as accurate as I can be.

5 Q Okay.

6 A And I should say that doesn't surprise me at all
7 because your mobile switching centers, your switches,
8 are distributed across the country, and it's based on
9 an economics. You want your switches that control
10 switching for a specific area close to that community
11 of interest. So the switches will be out scattered
12 across the country, typically, in the larger cities
13 that are managing their community of interest. But
14 for the types of systems that are in the bunkers,
15 those are systems that can easily be in remote cities
16 and you don't have all of the different circuit
17 switch connections for phone calls and everything for
18 a system like an SS -- SPS or a message center
19 because those are just messages that go.

20 If you walk into a switch room, we refer to
21 it where the switch is at, you just see thousands of
22 connections coming in for that switch. Typically, it
23 will have 50,000 to 100,000 connections that come in.
24 There's just a cable waterfall, they call it, for
25 that switch to connect to all the different places it

Mr. Lanning - Cross

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1 needs to.

2 Q Are you done?

3 A Yes.

4 Q Okay. How about the PDSN? Is the PDSN located
5 at a core site or bunker?

6 A No.

7 (Pause in proceedings.)

8 Q Okay. How about the HLR? Is the HLR located at
9 a core site or a bunker?

10 A No, and it would be for the same reasons I
11 described for the mobile switching centers.

12 Q Okay.

13 (Pause in proceedings.)

14 Q Okay. So let's now talk about what you referred
15 to and what we've seen some witnesses refer to as
16 Sprint's core site. Is it your opinion that the
17 elements that are housed in Sprint's core site are
18 core network elements under the Sprint's -- under the
19 Court's construction?

20 A For the same answers I gave earlier, there is
21 various boxes in a core site that I didn't perform my
22 analysis on because they just simply weren't
23 applicable to my analysis for this trial and for this
24 work on this case. As I pointed out, there were many
25 different boxes in those core sites. But where I'm

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1 drawing the relationship to are the two boxes that
2 Mr. Goettle did not ask me about, and I've said
3 multiple times if you look at the messaging servers
4 in the center and you look at the SPS on the right,
5 those two items are located together. That's the --
6 in the -- in the core sites. And Dr. Akl is saying
7 the SPS is a core network element, but he's saying
8 the messaging server is not. So the co-location of
9 those two systems is one of the indicators I used.

10 Q But you recognize, sir, that Sprint didn't even
11 have a messaging server at the core site until 2010,
12 four years into the damages period in this case?

13 A There was an evolution of where the short message
14 servers were at, and there was an evolution of where
15 the MMSCs were initially at and how they evolved.

16 Q So prior to those short message service centers
17 getting moved to the "core site," they were not core
18 network elements?

19 A No. Matter of fact, I believe they were with
20 some of the other core network elements that you
21 asked me about, but, again, that hasn't been part of
22 my analysis. I'm just recalling -- this has been
23 about two years ago that I did all the research and
24 the detail. But I think some of those messaging
25 servers were actually at the switch sites along with

Mr. Lanning - Cross

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1 the mobile switching centers.

2 Q Is it fair to say then that the core site houses
3 elements that are not core network elements under the
4 Court's construction?

5 A I don't know one way or another because I haven't
6 performed an analysis on every system that's in a
7 core site.

8 Q So it's possible?

9 A It's possible one way or the other.

10 Q And do you think it's probably that this
11 underground bunker that has this high security that
12 we've heard a lot about is probably housing more
13 equipment than just what are the core network
14 elements of Sprint's cellular network?

15 A As I said, I haven't performed an analysis, and
16 so you're asking me to guess, and I don't think
17 guessing is going to be good for any of us here.

18 Q Okay. So you don't know?

19 A I think I've just said that. I don't know one
20 way or the other.

21 (Pause in proceedings.)

22 Q Oh, I wanted to clarify. You made -- you
23 mentioned that I didn't -- I didn't call out the
24 messaging server or the SPS as being at the core
25 site. That was part of your answer before?

Mr. Lanning - Cross

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1 A Yes.

2 Q So I added that in there. I thought that came
3 through abundantly clear yesterday during your
4 testimony, but I did -- I did add it in there. You
5 see them on Plaintiff's Drawing Number 6, correct?

6 A Yes.

7 Q Okay.

8 (Pause in proceedings.)

9 Q Okay. The last slide I'm going to -- I think the
10 last slide I'm going to show you on the location
11 factors, your slide 48. Do you see that?

12 A Yes.

13 Q Do you recognize this from your presentation with
14 the jury yesterday -- from yesterday?

15 A Yes.

16 Q Okay. And in this -- I'm not 100 percent sure,
17 but you -- I think you took issue with what Dr. Akl
18 said in his testimony on direct examination, right?

19 A I don't think I took issue with it. I just used
20 that as Dr. Akl in support of what's in one of these
21 datacenters, as he refers to it as datacenters. And
22 he's describing that, and I'm saying the messaging
23 servers are in the same datacenter that he is
24 describing to be the housing or the place where core
25 network elements are at.

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1 Q But you do understand that Dr. Akl is not
2 ascribing to a notion that you look at a physical
3 location and trying to decide as a matter of
4 technology and this patent whether an element is a
5 core network element under the Court's construction?

6 A I think the jury can take his statement -- my
7 interpretation is he's describing what these data
8 network centers are, and there's core network
9 elements in those. And I was just simply saying and
10 showing that he said the SPS is a core network
11 element, it's in one of these center, but, again, a
12 system that is located with it, specifically, the
13 messaging servers, are not. And I'm just showing the
14 inconsistency with his statement and what's really
15 the case in the Sprint network.

16 Q Was it an inconsistency in his analysis, or is it
17 an inconsistency between what you're saying and his
18 opinion?

19 A I think it's an inconsistency in his own
20 analysis --

21 Q I see.

22 A -- that's flawed.

23 Q Well, then let's put it into context on what the
24 actual question and answer were, and we'll see if
25 there's an inconsistency.

Mr. Lanning - Cross

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1 MR. GOETTLE: Mr. Dyer, can you pull up the
2 testimony from February 2nd at page 124, starting at
3 line 12?

4 (Pause in proceedings.)

5 BY MR. GOETTLE:

6 Q And, sir, I'm basing -- I'm pulling out surround
7 language from Dr. Akl's testimony that surrounds what
8 you pulled out in your quote that we were just
9 looking at on the slide. Do you see that?

10 A I see a lot of testimony, but I'll take --

11 Q Okay.

12 A -- your word for it.

13 Q Okay. You'll take my word for it?

14 A Yes.

15 Q Okay, thank you.

16 A So far.

17 Q It's a dangerous thing to take my word for it.

18 A Well, to begin with, I'll take your word for it,
19 and --

20 Q Okay.

21 A -- then when you get to the specific question
22 then I'll read it more carefully.

23 Q Okay. So I asked him, question -- starting at
24 line 12, I asked him,

25 Question: "Okay. I see that you have on

Mr. Lanning - Cross

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1 slide 48 a picture of those switch board operators.
2 Could you explain to the jury why you have that on
3 there?"

4 Answer: "Yeah. So this is just my
5 analogy, trying to remind the jury the core network
6 elements -- and it's easy to visualize the cell
7 phone. And the tower -- if you're driving on the
8 highway, you actually see sometimes -- if you're
9 looking for them, you see the cell phone towers. The
10 core network elements are the components that you
11 don't see." And that's where we're picking the
12 language that you -- this is where you -- we pick up
13 what you had quoted on your slide. I lost my --

14 Answer: "The core network elements are the
15 components that you don't see. Those are the ones
16 that are in -- you know, the datacenters, they're
17 underground, those are what perform core
18 functionality. And this core functionality, we have
19 to look at the definition." So he's talking about
20 the core functionality, which is entirely what his
21 basis of his opinion is on, and you even said that
22 yesterday, right?

23 A And that's -- and that's true. And he's
24 identified what these datacenters, one of the
25 elements, the SPS, to be a core network element

Mr. Lanning - Cross

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1 that's in one of these datacenters that you don't
2 see. And where he's inconsistent is in that same
3 datacenter where he says there's an SPS that's a core
4 network element, there's a messaging server that does
5 a lot more than that database sitting there. It
6 performs all the messaging functions, but yet it is
7 not a core network element.

8 Q So that's not an internal consistency in Dr.
9 Akl's analysis, it's where you -- it's an area where
10 you and he differ?

11 A I don't think so. I think --

12 Q No?

13 A -- when Dr. Akl looks at functionality he's
14 inconsistent with his analysis of using just
15 functionality and where these nodes are at. It's a
16 continuation of inconsistencies of saying that a
17 messaging -- if you just look at functionality, a
18 messaging server that's responsible for sending a
19 query to a database, receiving the response from a
20 database, is not functionally core, but the database
21 that it is sending the query to is. And just ask
22 yourself which one of these nodes on a functional
23 level is more important to core functionality, the
24 messaging server that's doing the routing of the
25 message, sending the queries, and storing all these

Mr. Lanning - Cross

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1 messages, and forwarding them down to the cell
2 phones? Is that functionality core functionality
3 more or less than a database that that system
4 queries? That's my point about his analysis is
5 inconsistent when just looking at functionality.

6 Q You're done, sir?

7 A Yes.

8 Q Okay.

9 MR. GOETTLE: Can we go back to the "Wolf
10 Vision?"

11 BY MR. GOETTLE:

12 Q All right, sir, I'm actually -- I'm glad you went
13 where you went because that's where we're going to go
14 next. So let's talk about the messaging server. I
15 just put up slide 24 from your presentation
16 yesterday.

17 A Yes.

18 Q Okay.

19 MR. GOETTLE: Zoom out a little bit.

20 BY MR. GOETTLE:

21 Q You presented this to the -- to the jury
22 yesterday?

23 A Yes.

24 Q Okay. And you had a similar slide for MMS. This
25 one is specific to SMS, right?

Mr. Lanning - Cross

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1 A That's -- that's correct.

2 Q And I believe I looked at it and the only
3 difference between the two was instead of text
4 messages, I think you referred to multi-media
5 messages. Does that match your understanding?

6 A Again, I'd have to look, but --

7 Q Okay.

8 A -- I'm going to take a risky stance and say I'll
9 take your word for it.

10 Q Okay. So let's talk about these functions you
11 have written down here.

12 A Okay.

13 Q The Court's construction requires this, that a
14 messaging server functions be querying subscriber
15 databases, right?

16 A Yes.

17 Q Okay. I'm going to call this Plaintiff's Drawing
18 Number 7.

19 (Pause in proceedings.)

20 THE COURT: And you're writing that on
21 slide what?

22 MR. GOETTLE: Slide 24, sir.

23 (Pause in proceedings.)

24 BY MR. GOETTLE:

25 Q Okay. So the construction requires that a

Mr. Lanning - Cross

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1 messaging server perform the function of sending an
2 inquiry?

3 A Yes.

4 Q Okay. And the construction also requires the
5 functions of storing and forwarding messages?

6 A Yes.

7 Q Okay. And, sir, you agree that the SMSCs, the
8 messaging servers under the patent, do not create the
9 messages themselves, correct?

10 A Again, that sounds like a simple question, but
11 there are situations where an SMSC could create a
12 message. But to be fair, for the scenarios I showed
13 and that we've discussed in court, the SMSC receives
14 messages that are created elsewhere.

15 Q Yeah, they receive them and then they store them,
16 or they can store them, correct

17 A Yes.

18 Q Okay. So you have receiving down here, but
19 receiving already has to happen in order for there to
20 be storing, right? So receiving is duplicative of
21 storing?

22 A I wouldn't say that.

23 Q No?

24 A I think it's implicit, but the --

25 Q Oh.

Mr. Lanning - Cross

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1 A -- Court's construction doesn't include
2 receiving. It just has storing without implying
3 where the message comes from. But I would say and I
4 would agree if there's a storing function, that
5 implicitly means that the SMSC has to receive a
6 message from somewhere.

7 Q So I'm going to write "implicitly" -- can I write
8 "implicitly covered by storing?"

9 A Yes. As I just explained, you have to receive a
10 message -- the SMSC has to receive a message before
11 it can store it.

12 Q Okay. Okay. And then you write that the
13 messaging server also performs -- oh, actually, we
14 didn't talk about -- let me go back to forwarding.
15 Let's talk about forwarding for a second. The
16 messaging server has two options on where to send a
17 message, right? It either sends it to the
18 inter-carrier gateway or it sends it to the mobile
19 switching center. Two options, right?

20 A At a highest level, I would agree with you, but
21 it's sending -- to clarify your question, it's not to
22 just a message center. It's one of many mobile
23 switching centers that it sends it to.

24 Q Okay. So fair for me to write -- I would like to
25 write -- two lines below this, I'd like to write "to

Mr. Lanning - Cross

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1 inter-carrier gateway or to MSC," fair?

2 A "To a MSC."

3 Q Okay.

4 (Pause in proceedings.)

5 Q "To the inter-carrier gateway," or "a?"

6 A "A." There may be more than one.

7 Q "To an" I guess would be proper.

8 A Yes.

9 Q Okay. And those are the only -- let me number
10 them. One, two. Those are the only two options,
11 right? So in order to find out which of these, the
12 messaging server queries subscriber databases, and if
13 the phone -- if the phone number is not found in the
14 subscriber profile system, the SPS, then the
15 messaging server will receive a response to its query
16 that says something to the effect of "phone not
17 found," and that's the signal for the messaging
18 server to know oh, I send this to the inter-carrier
19 gateway because this is not headed towards a Sprint
20 subscriber?

21 A Yes, the response is that phone is not on the
22 Sprint network, so then the messaging server needs to
23 route that message to the inter-carrier gateway. If
24 you recall the one slide I showed where it's routing
25 to T-Mobile, that would be an example where it's

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1 going to a different network, "it," meaning the
2 message.

3 Q Okay. So I didn't -- I stupidly didn't give
4 myself enough room this way, so I'm going to go the
5 other way, but I'd like to write "finds out from
6 SPS." For this line I'd like to --

7 A For one -- for the one example you said, but --

8 Q Yes.

9 A -- that's not the only query that the messaging
10 server performs.

11 Q And then in order to know if it's going to go to
12 a mobile switching center and which mobile switching
13 center, the messaging server finds that out from the
14 home location register, which stores the location
15 information about the phone?

16 A Yes, and other information that's used by the
17 messaging server. And that's the query I showed on
18 four lines of text that actually was that query
19 between an SMSC and an HLR.

20 Q Okay. Okay. And then for these, where you say
21 they're screening and blocking and routing -- well,
22 actually, routing -- we just talked about routing,
23 right? Because these are the two places where the
24 message might get routed to, and these are the -- how
25 the messaging server finds out which place to route

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1 it to.

2 A I was waiting for the question.

3 Q Okay. For routing, we just talked about routing
4 when we just talked about forwarding, correct?

5 A No, they're -- I distinguish those being two
6 different things. Forwarding would be forwarding a
7 message to a phone on network when it's ready to
8 receive it. So if I'm sending a message between one
9 Sprint mobile phone and another Sprint mobile phone,
10 the forwarding that the message server does is it
11 forwards that message to the serving MSC when that
12 phone is available. Now, if that phone is available
13 when the person sends the message, it will
14 immediately go forward to the recipient phone. But
15 if the recipient's phone is turned off, the SMSC will
16 store that message and way for a notification of when
17 that phone, the recipient phone, is turned on and
18 ready to receive. So that's the forwarding function.

19 The routing function is the routing
20 function to the inter-carrier gateway, meaning to go
21 to other carriers. An example I showed is routing to
22 T-Mobile.

23 Q Okay. So we have screening and we have blocking?
24 Those are --

25 A Yes.

Mr. Lanning - Cross

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1 Q -- the two functions? And the way that the
2 messaging server finds out whether it's a screen or
3 whether it's a block is party of the query response
4 it receives from the SPS?

5 A Yes.

6 Q Okay. So fair to write "finds out from SPS?"

7 A If that's what you want to write, yes. It's --

8 Q Well, do you agree?

9 A That's fine. A computer doesn't find anything
10 out. It just really responds to the -- to the
11 response, the information that's there.

12 Q But it's pretty common for even computer
13 scientists to refer to computers as operating the way
14 humans operate because it's a way of understanding
15 how they work?

16 A I would say there are some computer scientists
17 that think that computers have more human tendency,
18 but I would prefer to keep them as processing
19 machines.

20 Q Okay. And that was Plaintiff's Drawing Number 7.
21 I think I said that, but just in case the record is
22 not clear. Okay.

23 (Pause in proceedings.)

24 Q We also -- you also showed this. This is your
25 slide 99. And you talked about the call flows,

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1 correct?

2 A That's correct.

3 Q Okay. And you take issue with Dr. Akl relying on
4 the call flows that he relied on in terms of the step
5 counting, correct?

6 A That's correct.

7 Q So let's just make sure the step counting is very
8 clear to the jury about what we're -- what we're
9 talking about here. What we're talking about, or
10 what you and Dr. Akl are disagreeing on, is step
11 counting, but it's step counting that's really used
12 by the damages experts in the case, right?

13 A That's my understanding is the -- we provide
14 input to the damages folks, and they need to
15 determine the number of infringing steps, as I
16 explained yesterday, over the total number of steps
17 involved. So Dr. Akl and I have a difference of
18 opinion on both the numerator, the number of
19 infringing steps, and we have a great difference of
20 opinion on the denominator, the total number of steps
21 that are involved in sending a message.

22 Q So suffice to say for the jury's purpose, at
23 least in terms of your and my conversation right now,
24 the bigger the denominator, the lower the damages,
25 right?

1 A That's correct.

2 Q And so the way the -- that denominator gets
3 bigger is by having more steps in total in the
4 process of Sprint sending an SMS, for example?

5 A I would say the way the denominator gets bigger
6 is by counting all the steps --

7 Q All of them.

8 A -- that are involved, just --

9 Q Right.

10 A -- not summarizing the high level --

11 Q Right.

12 A -- number of steps. And just to remind the jury,
13 I found that the denominator for SMS messages was
14 more than two times that that Dr. Akl used. And so
15 if you think about that for SMS messages, that
16 immediately halves the damages quotient, right,
17 because I've doubled the denominator. For MMS
18 messages, it's more than three times bigger, so I've
19 reduced the damages number that should be used by
20 two-thirds, or it should only be a third of what
21 they're saying. So it's very significant.

22 Q Now I'm showing on the slide, your slide 98, this
23 is the -- these are the steps that Dr. Akl relied on,
24 correct?

25 A That's correct.

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1 Q Okay. But you do recognize that this is from a
2 Sprint document that three Sprint witnesses said was
3 an accurate representation of the steps involved in
4 sending an SMS message or an MMS message?

5 A And I don't disagree that it's --

6 Q Okay.

7 A -- not acc -- I don't -- I didn't say it wasn't
8 accurate. I'm saying it was used for a different
9 purpose than determining the total number of steps.
10 It's only a high level summary to focus on specific
11 areas of messaging that the document uses.

12 Q Okay. Last topic, speed. In your -- if I
13 understood your direct examination, the patent is
14 going to slow things down. If you implement the
15 invention, you'll actually slow down a network, and
16 not speed it up, is that correct?

17 A Based on the external interfaces that are defined
18 and claimed in the patent, that's correct.

19 Q So that, in actuality, the patent then has no
20 useful purpose, the invention of the patent has no
21 useful purpose?

22 A No, the -- speed was not listed as one of the
23 purposes of the invention. The purpose of the
24 invention, as stated by the patent, is to find out
25 from the network what IP address a mobile is using

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1 because the IP addresses for mobiles are dynamically
2 assigned. A lot of times when we use a computer at
3 home we have a consistent, or a static, IP address.
4 That's not the way the cellular network works. The
5 cellular network assigns an IP address on a temporary
6 basis to a mobile phone when it needs a data
7 connection. When that data connection for that
8 period of time is finished that data connection is
9 released and so is the IP address. And, for
10 instance, if you check an email, you'll get an IP
11 address on a temporary -- on your phone for that
12 period of time. Once you check your email and you're
13 not using the data channels, the data channels will
14 be released and so will that IP address.

15 Now, let's say an hour later, when we have
16 a break from court you check your email again. You
17 may get the same IP address on your phone, but you
18 may get a different one. Now, if a short message
19 service center or a multi-media message center is
20 external to the network, the patent explains that it
21 needs to ask the network what IP address is this
22 mobile using right now so I can send it data? That's
23 the point of the patent. And I'm happy to go into
24 those columns and descriptions to support what I just
25 explained if you would like.

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1 Q Okay. Well, I want to talk about speed.

2 A Okay.

3 Q So why don't we talk about what you wrote in your
4 expert report about speed?

5 A Okay.

6 Q In paragraph 203 of your non-infringement report,
7 you wrote, and tell me if I'm -- tell me if you
8 remember this, "As the patent itself teaches,
9 internal messaging servers do not achieve the same
10 result as external messaging servers. As the 870
11 patent states, 'An advantage achieved from placing
12 the messaging server external is that the multi-media
13 message will not be stored on the cellular network,
14 thus, reducing a burden in terms of storage and
15 processing.'" Do you recall writing that?

16 A Yes, and that's very different than speed. And I
17 recall writing it and I recall remembering exactly
18 what it is. What I meant by that, the whole point is
19 if you're putting a message server external to the
20 network, that processing power that's required and
21 all of the disk space, the storage that's required,
22 is now outside in that external messaging server. If
23 you put it on a messaging server internal to the
24 network, that processing power to receive and store
25 those messages and all of that disk storage space is

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1 internal to the network. It has nothing to do with
2 processing speed or bogging down the network, as you
3 heard in openings and other witnesses say.

4 Q Thank you.

5 MR. GOETTLE: I have no further questions.

6 THE COURT: Maybe we should take a very
7 short break. We got a late start. It's 11:45.
8 Let's take a ten minute break.

9 (Jury out, 11:45 a.m.)

10 THE COURT: We're in recess for ten
11 minutes.

12 (Recess taken from 11:46 a.m. to 12:12
13 p.m.)

14 THE COURT: Be seated, everyone. You may
15 proceed with redirect examination, Mr. Finkelson.

16 MR. FINKELSON: Thank you, Your Honor.

17 (Pause in proceedings.)

18 REDIRECT EXAMINATION

19 BY MR. FINKELSON:

20 Q Good afternoon, Mr. Lanning.

21 A Good afternoon.

22 Q I was hoping to say good morning to you. I
23 looked up at the clock and realized I wasn't so -- I
24 wasn't so lucky, but good afternoon to you.

25 A We both looked at the clock. I was going to

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1 correct you if you said morning.

2 Q I think it may have been more than just you and
3 I, to be frank, who looked at the clock. Let's get
4 back to your analysis, Mr. Lanning. In conducting
5 your analysis with respect to non-infringement in
6 this case, did you look at the 870 patent?

7 A Yes.

8 Q Okay. Did you look at the relevant standards for
9 a CDMA2000 network?

10 A Yes.

11 Q Okay. And did you look at Sprint's actual
12 implementation?

13 A Yes.

14 Q Okay. Did you consider functional
15 considerations?

16 A Yes.

17 Q Okay. Did you consider logical considerations?

18 A Yes.

19 Q And did you consider physical considerations in
20 reaching your conclusion?

21 A Yes.

22 Q Okay. Now, during Comcast's counsel's analysis,
23 he took you through what he called a seven factor
24 analysis, right?

25 A Yes.

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1 Q Okay. Mr. Lanning, is this your seven factor
2 analysis or is this Comcast's counsel's seven factor
3 analysis?

4 A This is a creation that's -- of Comcast's factor
5 analysis that started at my deposition about a year
6 ago. But all of that analysis, if you summarize it
7 or break it down, is in the three specific areas or
8 layers: functional, logical, and physical.

9 Q Now, there was some discussion about switch sites
10 in your cross-examination. Do you recall that, sir?

11 A Yes.

12 Q Do Sprint's switch sites contain core network
13 equipment?

14 A Yes.

15 Q Okay. And is that where the MSCs are?

16 A Yes, that's why they're referred to as switch
17 sites, because the MSC is the mobile switching
18 center.

19 Q And back when Sprint's SMSCs were at Sprint's
20 switch sites, co-located with those mobile switching
21 centers, were those SMSCs core network elements of
22 Sprint's cellular network?

23 A Yes, because the SMSCs have always been Sprint's
24 core -- in Sprint's core network.

25 Q You were asked a question that had a negative in

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1 it with respect to whether they were core network
2 elements at that time, and you answered no, I think
3 disagreeing with Comcast counsel. So I just wanted
4 to be clear for the record. But when Sprint's SMSCs
5 were co-located with the MSCs at those switch sites,
6 it's your opinion -- or is it your opinion that those
7 SMSCs were core network elements?

8 A Yes, definitely.

9 Q Do Sprint's core sites or bunkers also contain
10 core network equipment?

11 A Yes.

12 Q Is that where the SPS is that's at issue in this
13 case?

14 A Yes.

15 Q And when Sprint's SMSCs have been co-located at
16 the core sites or bunkers with the SPS, is it your
17 opinion that those SMSCs have been core network
18 elements of Sprint's cellular network?

19 A Yes.

20 Q Now, you testified yesterday, and there was some
21 discussion about it today as well, Mr. Lanning, that
22 you can't automatically -- I think was your word
23 yesterday -- you can't automatically say that when a
24 Sprint witness or document says "core network" that
25 it matches up with the Court's claim construction.

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1 Do you recall that testimony?

2 A Yes.

3 Q Is that because in doing your job as an expert,
4 you want to be careful to consider all of the
5 relevant evidence?

6 A That's correct.

7 Q Have you, in fact, in your analysis considered
8 the testimony of Sprint witnesses and considered
9 Sprint documents?

10 A Yes.

11 Q In your opinion, is the way in which Sprint's
12 employees, it's engineers and operational folks,
13 spoke to this jury about the Sprint core network
14 consistent with the Sprint documentation that you've
15 analyzed?

16 A Yes, the documentation and testimony is all
17 consistent.

18 Q Do you believe that the Sprint documents that you
19 shared with this jury talk about Sprint's core
20 network in a way that is consistent with how the term
21 "core network" is used in the Court's definition of
22 "cellular network" that is in tab two of the jury's
23 binders?

24 A Yes.

25 Q And is it your opinion, sir, that the way in

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1 which Sprint's employees have spoken to this jury
2 about the Sprint core network is consistent with how
3 the term "core network" is used in the Court's
4 definition of "cellular network" that is in tab two f
5 the jury's binders?

6 A Yes, with one exception that I remember. There
7 is some discrepancy with one witness whether the bay
8 station system and mobile station were in the core
9 network or not, but that's the only inconsistency.
10 Where the short message service centers are or the
11 multi-medica message servers are there hasn't been
12 any inconsistencies.

13 Q And whether the bay station system is part of the
14 core network or part of the cellular network, is that
15 relevant to any determination that this jury needs to
16 make in this case, in your opinion, sir?

17 A No, it's not. As we discussed, the key issue is
18 to determine are the Sprint messaging servers
19 internal to the Sprint cellular network or external
20 to the Sprint network, not whether the bay station
21 system is in the core network or just in the cellular
22 network.

23 Q And you've listened to the testimony. Does
24 everyone seem to agree that the bay station system is
25 at least part of the cellular network?

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1 A Yes, everyone agrees it's part of the cellular
2 network, and then even one of the standards showed
3 the bay station system as either -- they could either
4 be part of the core network or outside the core
5 network, but it's always inside the cellular network.

6 Q Let's talk about the 870 patent for a moment. In
7 your opinion, does the 870 patent speak primarily in
8 the language of GSM networks?

9 A Yes, and matter of fact, I believe there's only
10 one sentence in the whole patent that mentions
11 CDMA2000 networks. The rest of the patent is all
12 specific to GSM -- the GSM family of networks.

13 Q Do I -- do you and Dr. Akl agree, sir, that the
14 870 patent claims require a messaging server that is
15 external to the cellular network?

16 A I believe we agree on that, yes.

17 Q And is it your opinion that in CDMA2000 networks,
18 the standards recommend that the messaging server be
19 internal to the core network of the cellular network?

20 A Like I did before, I have to break that up. For
21 an SMSC, the standards clearly say that the SMSC,
22 they recommend that it should be internal to the core
23 network. For the MMMC, for the multi-media message
24 server, you may remember looking at that document
25 that had two different scenarios that we looked at,

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1 one that it could be inside the core network and one
2 that it could be outside the core network. An
3 example that was used is a service bureau.

4 Q And a -- and what would a service bureau be, if
5 you could remind me?

6 A That would be a third party company that owned
7 and operated a separate system that would not be part
8 of the Sprint network or Sprint employees.

9 Q And if a CDMA2000 network operator implemented
10 its messaging servers external to the cellular
11 network, whether it was contrary to the
12 recommendation or, in the case of MMS, choosing
13 between one of those two options, would the 870
14 patent apply -- the claims of the 870 patent apply to
15 that network in those circumstances? Let me ask it
16 again. So if you had a scenario where a CDMA2000
17 operator elected to put its messaging server external
18 to the cellular network, would the claims of the 870
19 patent and its requirement of externality apply in
20 that circumstance?

21 A Yes. Again, if a CDMA2000 network elected to put
22 the messaging server external to the network, then
23 that would match up with the claims that require the
24 messaging server be external to the cellular network.

25 Q And in the case of SMS, if it elected to do that,

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1 in your opinion, would it be acting contrary to the
2 recommendation provided in the ANSI-41 CDMA2000
3 standards?

4 A Yes, it would be contrary to the recommendation
5 for CDMA2000 to put an SMSC external to the network,
6 but an operator could elect to do that.

7 Q And when you say that the 870 patent applies
8 equally to a CDMA2000 network, is that the
9 circumstance that you're referring to?

10 A Yes, I should have clarified. It would only
11 apply to the CDMA2000 network for instances where the
12 messaging server was external to the cellular
13 network.

14 Q And other than Syniverse Picture Mail, which is
15 not for this jury to decide, in the course of your
16 analysis, did you find any evidence that Sprint
17 deviated from the CDMA2000 standard recommendations
18 with respect to placements of its messaging server?

19 A For the short message service centers, Sprint
20 followed the CDMA2000 standards recommendation. For
21 the multi-media message servers, Sprint followed
22 scenario two fo the MMS standard recommendation,
23 which is internal to the core network.

24 Q And it -- and when you say it did that do you
25 mean after the transition from Syniverse Picture

1 Mail?

2 A Right. You started your question "with the
3 exception of Picture Mail," so I left the Picture
4 Mail part out.

5 Q There were some questions today, sir, about Dr.
6 Akl's step counting analysis. Do you recall that?

7 A Yes.

8 Q Do you have any opinion, Mr. Lanning, on whether
9 it is proper for a damages expert to rely on a step
10 counting method?

11 A You're getting into an area where I'm not an
12 expert, but all I know is Dr. Akl provided a step
13 analysis for the steps and there's two problems with
14 his analysis. First off, he didn't count all the
15 steps. As I explained, for SMS, he missed over two
16 times the number of steps, and for the MMS messages,
17 he left out over three times the number of steps.
18 The other problem that I saw is that he weighted each
19 of the steps that he counted -- he didn't count them
20 all, but for the ones that he counted, he weighted
21 those equally. And I didn't feel that that was
22 proper because some of those steps were a lot more
23 expensive in network resource terms.

24 Q Is it fair to say that Dr. Akl and Ms. Riley
25 relied on a step counting message and, in the course

1 of your opinions responding to those, you did your
2 own analysis in response?

3 A Right. And I don't think it's a matter of
4 deciding which steps to count. The steps are the
5 steps, and every step needs to be counted because if
6 any individual step is left out or doesn't occur, the
7 message doesn't get delivered. That's how I looked
8 at it. Are these steps required to deliver a
9 message? Any one of the steps that I counted, if
10 they're left out, the message service would fail.

11 Q Different topic. You were asked some questions
12 yesterday about the word "essential." Do you recall
13 that?

14 A Yes.

15 Q And I believe that you pointed out to the jury
16 that "essential" is not in the Court's claim
17 construction for "cellular network." Did I heard you
18 correctly when you said that?

19 A Yes.

20 Q Do you understand that Dr. Akl does use the word
21 "essential" in his analysis?

22 A Yes, that's somehow his interpretation of the
23 Court's construction, that "essential" needs to be in
24 there, but it's definitely not in the Court's
25 construction.

1 Q Let's assume, for the sake of argument, that you
2 accept Dr. Akl's premise that "core network" means
3 "essential."

4 A Okay.

5 Q Do you have that scenario in mind?

6 A I think I understand the scenario that you're
7 giving me. Okay.

8 Q If you accept Dr. Akl's premise that "core
9 network" means "essential," is it your opinion that
10 messaging servers are essential elements of a
11 cellular network?

12 A Yes, they definitely would be. Without messaging
13 servers, you don't have messaging. And as you've
14 heard at least one Sprint witness say, there are
15 three essential-type services that they offer: voice
16 services for calls, messaging services for the
17 messages, and data services so that you can check
18 your email or search the internet.

19 Q Going back to your experience with British
20 Telecom that you spoke to the jury about yesterday,
21 even back in the period before 1999, were messaging
22 servers essential elements of a cellular network?

23 A They were. I'll never forget getting -- being --
24 the phone ringing early in the morning when the
25 messaging servers quit and we would still, at 2:00 in

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1 the morning, get thousands of calls into our customer
2 support center, and I was responsible for getting it
3 working as fast as possible. We also knew that we
4 would lose a lot of those subscribers, or customers,
5 if we stopped offering a messaging service to our --
6 we would lose them to our competitor.

7 Q Is it also your opinion, sir, that messaging
8 servers are essential elements of a cellular network
9 during the period that is relevant for infringement
10 in this case, from 2006 to the present?

11 A They were very important and essential back in
12 the 1990s. They're even more essential in the
13 infringement period, which starts in 2006.

14 Q Mr. Lanning, what does this jury have to decide
15 with respect to Sprint's messaging servers?

16 A As I explained earlier, this is that -- under
17 that -- this is going to be on the test. The key
18 question that you need to decide is are the Sprint's
19 mess -- are Sprint's messaging servers internal to
20 Sprint's cellular network or are they external?

21 That's the one key question that you have to decide.

22 Q And, Mr. Lanning, in your opinion, are Sprint's
23 messaging servers internal to Sprint's core network
24 of its cellular network or are they external?

25 A I believe that they are definitely internal to

1 Sprint's cellular network, as I showed you with all
2 the different evidence.

3 Q Do you understand that Dr. Akl has advanced a
4 different position on behalf of Comcast?

5 A Yes.

6 Q Have you seen any Sprint document that supports
7 Dr. Akl's opinion?

8 A No, nor has Dr. Akl provided any document in his
9 analysis that would provide that opinion in my mind.

10 Q Have you seen any ANSI-41 CDMA2000 standards
11 document that supports Dr. Akl's position?

12 A Again, I need to be careful because in the
13 standards, there's the standards documents for SMS
14 and then the standards document that I showed you for
15 MMS where the standard said that the messaging server
16 for MMS could either be internal to the core network
17 or external to the core network. So it was either
18 scenario two or scenario five.

19 Q With respect to SMS, have you seen any ANSI-41
20 CDMA2000 document that supports Dr. Akl's opinion
21 that Sprint's accused messaging servers are external
22 to its cellular network?

23 A No.

24 Q With respect to MMS, have you see any ANSI-41
25 CDMA2000 document that supports Dr. Akl's opinion

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1 that Sprint's MMSCs, other than Syniverse Picture
2 Mail, have been implemented external to Sprint's
3 cellular network?

4 A No.

5 Q Have you heard or read testimony, deposition or
6 trial, from any Sprint witness that supports Dr.
7 Akl's opinion?

8 A No, and I will put the caveat with the exception
9 of the Picture Mail application.

10 MR. FINKELSON: I have no further
11 questions. Thank you, Mr. Lanning.

12 MR. GOETTLE: I have a couple more
13 questions, Your Honor.

14 THE COURT: All right. We'll hear from you
15 on recross.

16 (Pause in proceedings.)

17 RECROSS-EXAMINATION

18 BY MR. GOETTLE:

19 Q Mr. Lanning, you just testified that it was
20 Comcast that came up with your -- with the holistic
21 seven characteristic analysis?

22 A Yes, and it was, in my mind, created during
23 deposition. I didn't start with the deposition or
24 anywhere in my report where I had listed these. And
25 so, in my mind, it was a creation of yours to

1 characterize my analysis.

2 Q So yesterday, when I wrote "Mr. Lanning's
3 Holistic Characteristics," you didn't point out that
4 these weren't your characteristics?

5 A No, I think I pointed out correctly where they
6 came from and that I used those characteristics.

7 Q Okay. You have your deposition testimony? I
8 handed it to you yesterday.

9 A Yes.

10 Q Okay. It's your deposition from March 3rd, 2016.
11 We're going to walk through this deposition testimony
12 and see who suggested the factored analysis. So
13 let's go to page 51 at line five.

14 A Okay, I'm there.

15 Q You're at 51, line five?

16 A Yes.

17 Q Question: "So it's your opinion that you can
18 determine whether in this hypothetical an SMSC is
19 inside or outside a cellular network based on
20 geography?"

21 Answer: "Not alone. Not by a long stretch
22 alone. I would consider that as one of six or seven
23 different factors."

24 Question: "Okay."

25 Answer: "And I was just going through, and

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1 to my mind, you're asking me a hypothetical because
2 I've never seen" -- I, unfortunately, interrupted
3 you. I said,

4 Question: "Yes?"

5 Answer: -- "such a system in my mind."

6 Question: "Okay."

7 Answer: "So I'm going through six or seven
8 different factors that I would look at to determine
9 is it owned by Sprint, but external to the cellular
10 network." Did I read that correctly?

11 A Yes.

12 Q Okay. Let's go to page 56, line 20 -- or, excuse
13 me, 57, line 20. Are you there, sir?

14 A Yes.

15 Q Question: "And I take it then it's for that
16 reason that interfaces and protocols is just one of
17 six or seven factors you would look at to determine
18 whether two elements are on the same network?"

19 Answer: "Yes. I don't believe any one
20 factor would be deterministic. I think you have to
21 look at all six or seven different factors to
22 understand." Did I read that correctly, sir?

23 A Yes.

24 Q Okay. Let's go to page 67.

25 (Pause in proceedings.)

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1 Q 67. Let's start at line ten. This one is going
2 to be a little bit longer, but it's important. Line
3 ten, 67,

4 Question: "One of those buildings is
5 only -- the only people in that building allowed to
6 be in that building are the employees of the third
7 party supplier, and in that building is where the HLR
8 is housed. With that tweak, is that HLR inside or
9 outside the cellular network?" Mr. Finkelson
10 objected to form, which --

11 MR. FINKELSON: I'm going to -- just
12 because I don't want to break up the flow of what
13 you're doing, I'll waive the objection to form, Your
14 Honor.

15 BY MR. GOETTLE:

16 Q Answer: "Well, again, I would have to look at
17 the factors. And I think that what we're confusing
18 here, I'm finding that this is confusing because what
19 I did for -- to determine, I -- I looked at seven
20 different factors."

21 THE COURT: Well, you kind of --

22 BY MR. GOETTLE:

23 Q Question: "Yeah."

24 THE COURT: Just a minute. You kind of
25 misread the --

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1 MR. GOETTLE: I apologize and will not do
2 it again.

3 THE COURT: You're not arguing now. And I
4 might add that I think all of this cross-examination
5 is already in evidence and can be used by you in your
6 closing argument. We've gone this route before. I
7 don't know how much longer you're going to spend on
8 this, but we've covered this issue in cross-
9 examination, and you've made your record.

10 MR. GOETTLE: Thank you, Your Honor.

11 THE COURT: You can finish --

12 MR. GOETTLE: No further --

13 THE COURT: You can finish the sentence
14 that you were reading from without your emphasis,
15 which --

16 MR. GOETTLE: I --

17 THE COURT: -- I think is unfair.

18 MR. GOETTLE: I lost my place. I think I
19 made my point. Thank you, Your Honor. No further
20 questions.

21 THE COURT: There's no redirect?

22 MR. FINKELSON: Nothing further, Your
23 Honor.

24 THE COURT: You may step down, Mr. Lanning.

25 (Witness excused.)

1 THE COURT: Sprint's next witness is Dr.
2 Polish?

3 MR. FINKELSON: It is, Your Honor.

4 THE COURT: It's 12:35. We seem to be
5 doing a lot of recessing. That's not a goal to be
6 desired, but I don't think we should start Dr. Polish
7 now.

8 MR. FINKELSON: Okay.

9 THE COURT: Recess for an hour. Be back at
10 1:35. Usual mid-day instructions. Don't discuss the
11 case among yourselves. If anyone tries to talk to
12 you about the case, say nothing to them and report
13 that to me. Have a good lunch. See you back here at
14 1:35.

15 (Jury out, 12:35 p.m.)

16 THE COURT: Anything we need to address
17 before we adjourn for lunch --

18 MR. FINKELSON: Not for Sprint, Your Honor.

19 THE COURT: -- recess for lunch?

20 MR. GOETTLE: Not from Comcast.

21 THE COURT: We're in recess for an hour.

22 (Luncheon recess taken, 12:36 p.m.)

23

24 * * *

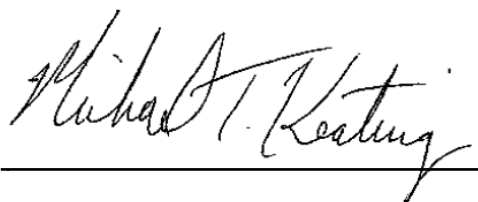
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CERTIFICATION

I, Michael Keating, do hereby certify that
the foregoing is a true and correct transcript from the
electronic sound recordings of the proceedings in the
above-captioned matter.

2/9/17

Date

A handwritten signature in cursive script, reading "Michael T. Keating", written over a horizontal line.

Michael Keating